

## SEQUENCE LISTING

<110> University of Illinois at Chicago

Sharma, Arun

Hoffman, Ronald

<120> HUMAN HEMATOPOIETIC GROWTH REGULATORY GENE AND USES

<130> MBHB: CU08/PPA

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<170> PatentIn version 3.1

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<212> DNA

<213> Homo sapiens

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<221> CDS

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<223> Human Hiwi Protein

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Ser Lys Thr Gly Ser Ser Gly Ile Ile Val Arg Leu Ser Thr Asn His

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Asp Tyr Asn Pro Leu Met Glu Ala Arg Arg Leu Arg Ser Ala Leu Leu

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Ser Lys Thr Arg Asn Gly Glu Asp Val Arg Ile Thr Ile Thr Leu Thr	
100 105 110	
aat gaa ctt cca cct aca tca cca act tgt ttg cag ttc tat aat att	384
Asn Glu Leu Pro Pro Thr Ser Pro Thr Cys Leu Gln Phe Tyr Asn Ile	
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Asn Tyr Tyr Asn Pro Asn Asp Pro Ile Asp Ile Pro Ser His Arg Leu	
145 150 155 160	
gtg att tgg cct ggc ttc act act tcc atc ctt cag tat gaa aac agc	528
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Ile Met Leu Cys Thr Asp Val Ser His Lys Val Leu Arg Ser Glu Thr	
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Val Leu Asp Phe Met Phe Asn Phe Tyr His Gln Thr Glu Glu His Lys	
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Asn Pro Lys Ser Thr Phe Lys Lys Ala Asp Gly Ser Glu Val Ser Phe	
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Leu Glu Tyr Tyr Arg Lys Gln Tyr Asn Gln Glu Ile Thr Asp Leu Lys	

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Gln	Pro	Val	Leu	Val	Ser	Gln	Pro	Lys	Arg	Arg	Arg	Gly	Pro	Gly	Gly			
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Ala Asp Thr Gln Ile Val Val Cys Leu Leu Ser Ser Asn Arg Lys Asp	
465 470 475 480	
aaa tac gat gct att aaa aaa tac ctg tgt aca gat tgc cct acc cca	1488
Lys Tyr Asp Ala Ile Lys Lys Tyr Leu Cys Thr Asp Cys Pro Thr Pro	
485 490 495	
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Ser Gln Cys Val Val Ala Arg Thr Leu Gly Lys Gln Gln Thr Val Met	
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Ala Ile Ala Thr Lys Ile Ala Leu Gln Met Asn Cys Lys Met Gly Gly	
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Glu Leu Trp Arg Val Asp Ile Pro Leu Lys Leu Val Met Ile Val Gly	
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Leu Gln Ala Ala Leu Arg Ala Trp Asn Ser Cys Asn Glu Tyr Met Pro	
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agc cgg atc atc gtg tac cgc gat ggc gta gga gac ggc cag ctg aaa	1872
Ser Arg Ile Ile Val Tyr Arg Asp Gly Val Gly Asp Gly Gln Leu Lys	
610 615 620	
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Thr Leu Val Asn Tyr Glu Val Pro Gln Phe Leu Asp Cys Leu Lys Ser	

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aga gtg aac acc aga ttt ttt gct cag tct gga gga aga ctt cag aat				2016
Arg Val Asn Thr Arg Phe Phe Ala Gln Ser Gly Gly Arg Leu Gln Asn				
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cca ctt cct gga aca gtt att gat gta gag gtt acc aga cca gaa tgg				2064
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Tyr Asp Phe Phe Ile Val Ser Gln Ala Val Arg Ser Gly Ser Val Ser				
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ccc aca cat tac aat gtc atc tat gac aac agc ggc ctg aag cca gac				2160
Pro Thr His Tyr Asn Val Ile Tyr Asp Asn Ser Gly Leu Lys Pro Asp				
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cac ata cag cgc ttg acc tac aag ctg tgc cac atc tat tac aac tgg				2208
His Ile Gln Arg Leu Thr Tyr Lys Leu Cys His Ile Tyr Tyr Asn Trp				
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Pro Gly Val Ile Arg Val Pro Ala Pro Cys Gln Tyr Ala His Lys Leu				
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Ala Phe Leu Val Gly Gln Ser Ile His Arg Glu Pro Asn Leu Ser Leu				
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Asn Tyr Tyr Asn Pro Asn Asp Pro Ile Asp Ile Pro Ser His Arg Leu  
145 150 155 160

Val Ile Trp Pro Gly Phe Thr Thr Ser Ile Leu Gln Tyr Glu Asn Ser  
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Val Leu Asp Phe Met Phe Asn Phe Tyr His Gln Thr Glu Glu His Lys  
 195 200 205

Phe Gln Glu Gln Val Ser Lys Glu Leu Ile Gly Leu Val Val Leu Thr  
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Lys Tyr Asn Asn Lys Thr Tyr Arg Val Asp Asp Ile Asp Trp Asp Gln  
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Asn Pro Lys Ser Thr Phe Lys Lys Ala Asp Gly Ser Glu Val Ser Phe  
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Leu Glu Tyr Tyr Arg Lys Gln Tyr Asn Gln Glu Ile Thr Asp Leu Lys  
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Gln Pro Val Leu Val Ser Gln Pro Lys Arg Arg Arg Gly Pro Gly Gly  
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Thr Leu Pro Gly Pro Ala Met Leu Ile Pro Glu Leu Cys Tyr Leu Thr  
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Gly Leu Thr Asp Lys Met Arg Asn Asp Phe Asn Val Met Lys Asp Leu  
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Ala Val His Thr Arg Leu Thr Pro Glu Gln Arg Gln Arg Glu Val Gly  
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Arg Leu Ile Asp Tyr Ile His Lys Asn Asp Asn Val Gln Arg Glu Leu  
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Arg Asp Trp Gly Leu Ser Phe Asp Ser Asn Leu Leu Ser Phe Ser Gly  
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Arg Ile Leu Gln Thr Glu Lys Ile His Gln Gly Gly Lys Thr Phe Asp  
 370 375 380

Tyr Asn Pro Gln Phe Ala Asp Trp Ser Lys Glu Thr Arg Gly Ala Pro  
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Leu Ile Ser Val Lys Pro Leu Asp Asn Trp Leu Leu Ile Tyr Thr Arg  
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Ser Gln Cys Val Val Ala Arg Thr Leu Gly Lys Gln Gln Thr Val Met  
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Ala Ile Ala Thr Lys Ile Ala Leu Gln Met Asn Cys Lys Met Gly Gly  
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675 680 685

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His Ile Gln Arg Leu Thr Tyr Lys Leu Cys His Ile Tyr Tyr Asn Trp  
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Pro Gly Val Ile Arg Val Pro Ala Pro Cys Gln Tyr Ala His Lys Leu  
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Ser Asn Arg Leu Tyr Tyr Leu  
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Phe Arg Gly Ser Ser Ser Gly Asp Pro Arg Ala Asp Pro Arg Ile Glu  
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Ala Ser Arg Glu Arg Arg Ala Leu Glu Glu Ala Pro Arg Arg Glu Gly  
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Gly Pro Pro Glu Arg Lys Pro Trp Gly Asp Gln Tyr Asp Tyr Leu Asn  
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Thr Arg Pro Val Glu Leu Val Ser Lys Lys Gly Thr Asp Gly Val Pro  
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Val Met Leu Gln Thr Asn Phe Phe Arg Leu Lys Thr Lys Pro Glu Trp  
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Arg Ile Val His Tyr His Val Glu Phe Glu Pro Ser Ile Glu Asn Pro  
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Gly Tyr Leu Phe Asp Gly Leu Gln Leu Phe Thr Thr Arg Lys Phe Glu  
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Gln Glu Ile Thr Val Leu Ser Gly Lys Ser Lys Leu Asp Ile Glu Tyr  
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Lys Ile Ser Ile Lys Phe Val Gly Phe Ile Ser Cys Ala Glu Pro Arg  
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Phe Leu Gln Val Leu Asn Leu Ile Leu Arg Arg Ser Met Lys Gly Leu  
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Glu Ile Arg Glu Phe Lys Met Glu Leu Trp Pro Gly Tyr Glu Thr Ser  
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Lys Val Met Arg Thr Glu Thr Ile Tyr Asp Ile Met Arg Arg Cys Ser  
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His Asn Pro Ala Arg His Gln Asp Glu Val Arg Val Asn Val Leu Asp  
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Leu Ile Val Leu Thr Asp Tyr Asn Asn Arg Thr Tyr Arg Ile Asn Asp  
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Val Asp Phe Gly Gln Thr Pro Lys Ser Thr Phe Ser Cys Lys Gly Arg  
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Asp Asp Cys Val Arg Ser Asp Pro Lys Leu Ile Leu Cys Leu Val Pro  
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Glu His Arg Lys Leu Pro Ser Arg Ile Val Phe Tyr Arg Asp Gly Val  
675 680 685

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Gln Leu Ala Tyr Ile Val Val Thr Arg Ser Met Asn Thr Arg Phe Phe  
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